Chapter 2.1: More Cat Velocities

Calculus I

College of the Atlantic. Winter 2021

The Speed of a Cat

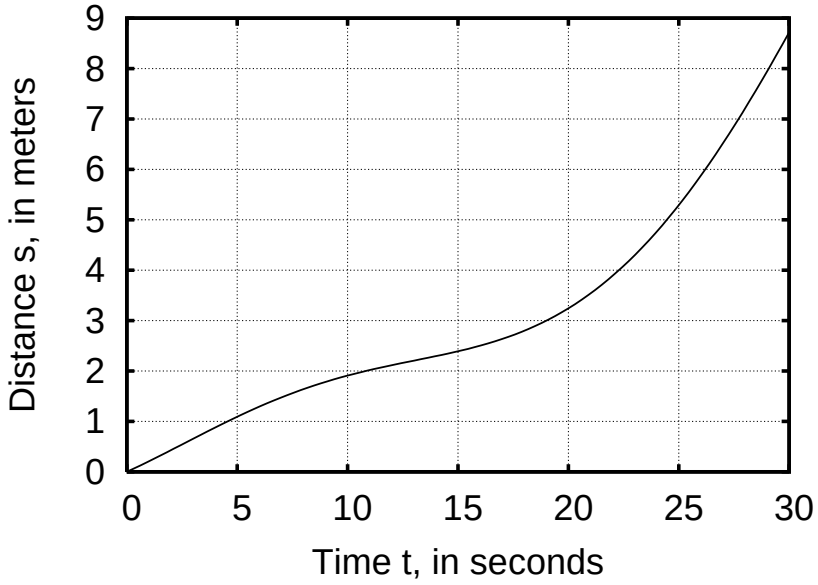
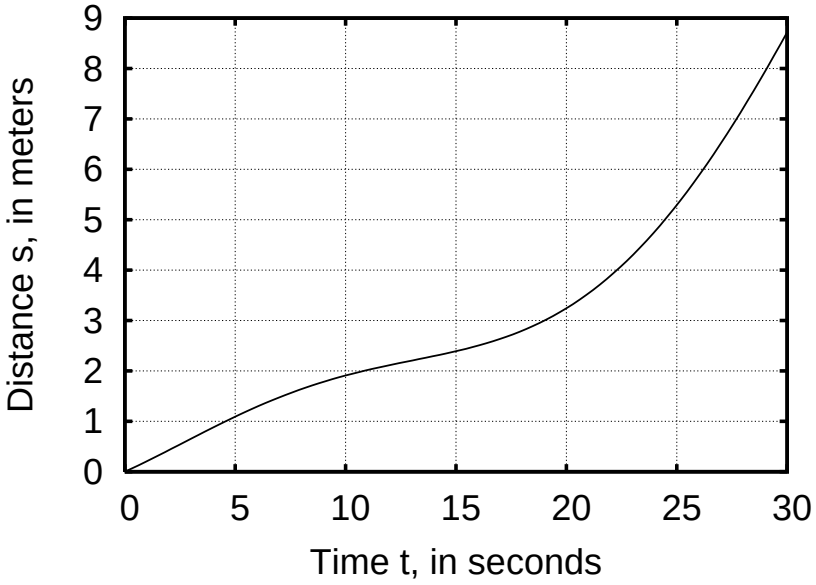
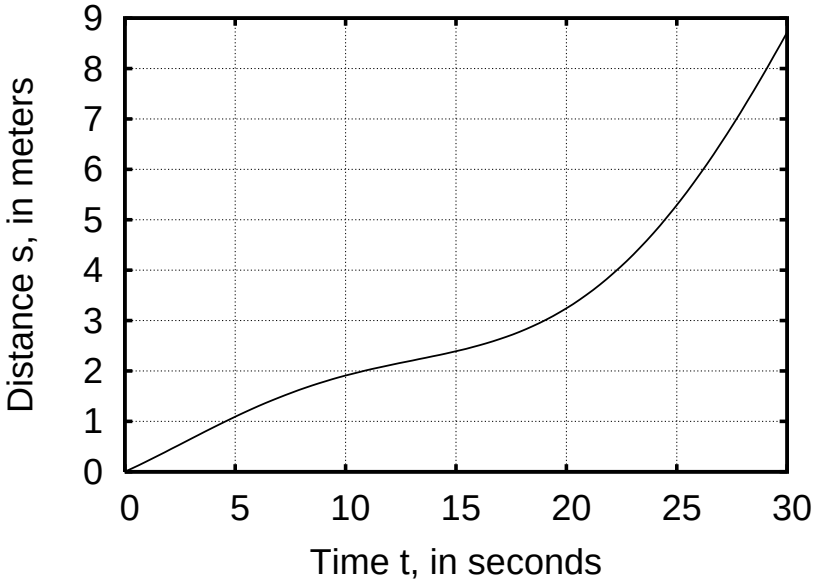


Figure 1: The distance s traveled by a cat as a function of time t.

1. Draw a line whose slope is the average velocity of the cat from $t = 15$ to $t = 30$.
2. Draw a line whose slope is average velocity of the cat from $t = 15$ to $t = 25$.
3. Draw a whose slope is the instantaneous velocity of the cat at $t = 15$.
4. Draw a whose slope is the instantaneous velocity of the cat at $t = 10$.
5. Using the line you just drew, estimate of the instantaneous velocity of the cat at $t = 10$.
6. Is the cat's speed faster at $t = 10$ or $t = 15$?

(There are additional copies of the figure on the other side of this paper.)


Distance s, in meters
0
1
2
3
4
5
6
7
8
9
0
5
10
15
20
25
30
Time t, in seconds


Distance s, in meters
0
1
2
3
4
5
6
7
8
9
0
5
10
15
20
25
30
Time t, in seconds